Maureen Ehrensberger-Dow, Andrea Hunziker Heeb,
Peter Jud, Erik Angelone

13 Insights from translation process research in the workplace

Abstract: Translation process research is moving out of controlled settings, such as classrooms and laboratories, into the reality of professional workplaces. Some of the inherent challenges can be partly addressed with multi-method approaches, but ecologically valid investigations of practice demand flexibility from both researchers and practitioners. We argue that the insights gained from such ventures into the wild are well worth the additional effort and can inform translation studies as well as other areas of applied linguistics and neighbouring disciplines. These insights can and should feed back into training and professional development.

1 Scope of translation process research

Translation process research (TPR) focuses on translating as an activity rather than on translation as a phenomenon or on translation products. Its defining characteristic is a systematic investigation of how target texts come into being, from the micro-level of solving linguistic challenges to the macro level of the influence of societal expectations on translatorial decisions. One of the primary motivations for process research has been to gain insights that can be applied directly to translator training, with studies on how translation competence or expertise is related to education and experience (e. g. Hurtado Albir, 2016). Early TPR relied primarily on concurrent commentaries or 'thinking aloud' (also known as TAPs) in attempts to access what happens in a translator's mind during translation. The low ecological validity of this technique has been found to be especially problematic with professionals, however, since most of them normally work silently. Asking them to talk about what they are doing while translating can thus distort the process in addition to slowing it down (see Jakobsen, 2003).

Methodological and technological developments, with parallels in other areas of applied linguistics such as writing process research, have expanded the toolbox of methods that TPR can now draw on. Some commonly deployed techniques in classroom settings to investigate problem solving, revision, and resource use include direct observation, interviews, questionnaires, screen and video

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recording, and stimulated-recall commentaries (e. g. Angelone, 2013a; Massey & Ehrensberger-Dow, 2011). Keylogging, eye tracking, and monitoring of brain activity can provide insights into focus of attention and mental load, but have usually been confined to laboratory settings because of logistical constraints (see Teixeira, 2014 for a recent exception). To overcome limitations inherent in all of the techniques, multi-method approaches have become the norm in TPR. Yet combinations of methods and triangulation of data can only partially overcome issues associated with ecological validity if the object of study is human translation: the latter is a situated activity that should be studied when and where it happens.

2 Moving process research into the wild

A multi-method approach called Progression Analysis (Perrin, 2003) has proven valuable in investigating journalists' writing processes and has also served as a good-practice model for research with translators. For example, it was applied in a longitudinal study investigating differences between students and professionals involving translation processes recorded in controlled settings or in the offices of one of the largest language service providers in Switzerland.[1] The extension of this multi-method approach that we use in controlled settings combines observations, interviews, questionnaires, keylogging, screen recording, eye tracking, retrospective commentaries, and version analysis. Although some of these TPR methods lend themselves to settings less controlled than classrooms or labs, there are challenges associated with doing process research in the field.

During the preparation for the workplace recordings in the longitudinal study, two researchers from our team spent two to three days a week for about a month doing pilot testing and preliminary interviews at the company offices. The on-site researchers' involvement was not ethnographic in the strictest sense but, as professional translators themselves, they had an insider's perspective on factors that could impact on the translation process. As a consequence of their experience on the 'translation floor' of the company, they were able to adjust the study design and data collection procedures to accommodate the physical and organizational constraints that they encountered. The embeddedness of the researchers also contributed to the acceptance of the study.

Two of the most commonly used methods in TPR, keylogging and screen recording, can be difficult to implement at the workplace for reasons of computer

1 Additional information about the *Capturing Translation Processes* study is available here: www.zhaw.ch/linguistik/ctp

security and confidentiality. An unanticipated problem with keylogging in our longitudinal study was the inability of any of the solutions available at the time to reliably log input from translation memory. Screen recording, which had originally been foreseen as a supplementary source of data, became the method of choice during the six months of data collection, although compatibility and other technical issues had to be resolved first. The on-site observations and interviews revealed that translation memory was in common use at this company, but only in the analyses of the screen recordings did it become clear how integral it had become to professional translation (see also O'Brien, 2012). Close analysis and coding of the workplace recordings have allowed us to identify practitioners' problems, practices, and use of resources as well as to gain information about the role of revision and quality assurance in professional translation.

Collecting retrospective commentaries stimulated by recordings of the translation process presents special challenges in workplace research. In the lab, we had started using visually rich gaze plots from eye-tracking software for such commentaries, but new security regulations at the language service provider precluded using eye tracking at the translators' workstations. Since the recordings at the workplace are of authentic translation jobs, they vary with respect to length, genre, completeness, and complexity. Suitable recordings have to be identified and prepared, convenient times and quiet places found to do the commentaries, and delays between the recordings and the commentaries kept to a minimum in order to mitigate memory effects. In our longitudinal study, the researchers' extended involvement on-site made it easier to select processes typical of the translators' workloads and to arrange mutually convenient times. Despite the lack of an information gap (i. e. the on-site researcher had already seen the processes being commented on), the practitioners provided far more information about the impact of translation tools and other influences on the process than had emerged in any of the recordings done in more controlled settings. The degree of metalinguistic awareness of the process and of quality issues emerged as a distinguishing characteristic of professional translators.

3 Process research and workplace realities

Doing research at the workplace can be far more challenging than in controlled settings because the object of study can shift between different tasks, agents, and locales. For example, a practitioner might begin to work on a translation, interrupt that process to answer a question from a colleague, correct something in translation memory, respond to an urgent email, etc., before returning to the

translation, which afterwards might be sent to someone else in the network for revision. Assigning activities to a particular process can be problematic if researchers are unable to capture what happens during and between such shifts. The nature of translation itself has changed as practitioners spend less time translating from scratch than evaluating options provided by translation memory and machine translation and shaping texts to fit clients' style guides and terminological requirements. Long and urgent commercial workplace source texts may be divided up among several translators around the world. Multinational companies and multilingual institutions such as the European Union may commission translations of one source text into multiple languages. In principle, this can allow for interesting comparisons between language versions, but the situation is often complicated by the blurring of boundaries between source and target text production (see Van de Geuchte & Van Vaerenbergh, 2016). Although certain comparisons cannot be planned and may never be possible, individual case studies can also provide rich insights into translation practice in professional settings (e. g. Ehrensberger-Dow & Hunziker Heeb, 2016; Risku, 2014).

Researchers must invest the time to become familiar with the reality of professional workflows and adjust their questions and data collection accordingly. In the longitudinal study mentioned above, unforeseen delays in data collection were caused by an office move that affected most of the translators. The disruption of this move precipitated discussions between the on-site researchers and the practitioners that led to new research questions that might not have emerged otherwise. Those research questions formed the basis of an interdisciplinary follow-up workplace study that focused on the effects of disturbances and ergonomic issues on the situated activity of professional translation.[2] Being part of an organization, even to collect data for a study, can affect that organization's practices, so workplace research should be considered a type of action research (cf. Cravo & Neves, 2007). One of the goals of all of our workplace research has been to release expert knowledge to the participating organizations, but this can preclude validation of findings at later stages because changes might be implemented before data collection is complete. For example, we have found that having translators comment on recordings of their processes seems to heighten their metalinguistic awareness, which may have an influence on subsequent processes. Rather than avoiding what would be considered 'confounds' in an experimental setting, we have documented them as potential consequences of participant observation of the workplace and as examples of research feeding back into praxis.

2 For more information about the *Cognitive and Physical Ergonomics of Translatio*n study, see www.zhaw.ch/linguistics/ergotrans.

The main advantage of workplace research is its potentially high degree of ecological validity, but there are threats to validity regarding the methods which can be used, the (self) selection of participants, and the unpredictability of the tasks to be carried out during any particular observation period. During our study into the ergonomics of professional translation, we realised that the difficulty in recruiting practitioners with certain profiles (e. g. commercial translators with little use of translation technology) reflected the realities of professional translation in Switzerland and was actually the first significant result of the project. Only as the study progressed did it become clear how crucial a deeper understanding of different working profiles would be to addressing ergonomic needs in professional translation, so data collection goals were adjusted accordingly.

Ethical issues such as informed consent to participate in a study have to be handled carefully in translation workplace research. With so many agents and stakeholders involved in translation networks, it is important to establish who has to consent to what and how much information should be provided in advance to clients, commissioners, employers, project managers, IT/security staff, terminologists, translators, revisers, and other people involved in quality assurance. Not only must anonymity of the direct participants be ensured, as is standard in most empirical research, the reputational risks of any organisations involved must be kept to a minimum. The content of source and target texts, client names, and even the workflow software itself might be confidential and subject to high security. Regular reviews and feedback sessions with stakeholders provide opportunities for transdisciplinary cooperation that can lead to unexpected insights and further research questions. In our second workplace project, the security issues which arose, though inconvenient, also opened up discussions with employers and translators about the constraints that language service providers are under and the impact they have on this situated activity.

Investigating activity at the workplace is not only ecologically valid, it is one of the best ways to test emerging models of situated cognition, which view cognition as embodied, embedded, extended, and/or distributed (e. g. Robbins & Aydede, 2009). For example, the translators in our studies have indicated that the tools at their disposal are very helpful but that they limit autonomy. This is especially true for CAT tools and translation memory, which offer solutions for similar, previously encountered problems, but might block innovative, creative, potentially better solutions. Insights gained from observing what impact external demands have on the complex bilingual activity of translation extend beyond this profession: they can inform any discipline that is interested in how humans interact with their environment.

4 Relevance for praxis

Ideally, workplace research is relevant not only to theory building, model testing, and training, but also to the participants themselves. Opening up their workplaces for external examination indicates a willingness to learn on the part of the translators and employers concerned, so they are entitled to gain something from the experience. Employers might be motivated by an interest in identifying weaknesses in their processes and potential for optimising performance whereas the translators might be hoping for an opportunity to develop their expertise. The findings from our workplace studies strongly suggest that translators profit from viewing recordings of their own processes and reflecting on their practices.

We have observed that some professionals have become adept at completing routine tasks and have developed work-arounds for non-optimal settings and tools. Since no two translation tasks are ever identical, however, translators cannot rely on routine solutions alone and must instead develop adaptive expertise. Purposefully heightening awareness and providing feedback about essential elements of the system might be key components in developing such expertise and empowering translators in their status as language professionals. In our interdisciplinary study, occupational therapy researchers carried out on-site ergonomic assessments of participating translators' workplaces and demonstrated to the translators what improvements could be made. Between those assessments and the in-depth interviews at the end of the study, a marked increase in awareness of ergonomics by the translators and their employers was noted. Many of the professionals seemed to have developed effective coping strategies for dealing with certain ergonomic issues, which could be disseminated to others as good practice. Such professional development provides more opportunities for research to feed back into praxis than waiting for its impact to trickle through academic publications and curriculum changes.

5 Back to the classroom

Given the pedagogical origins of translation process research, the methods and findings of workplace studies hold great potential for informing translator training and, in doing so, can further bridge gaps between academic practices and professional realities. As an example of research feeding back into the classroom, trainers at our institute have students create screen recordings for purposes of self-reflection on problems encountered, potential error triggers, and information retrieval routines, among other things. In an attempt to foster an awareness of

good practices exhibited by professionals, we encourage students to reflect on their processes through a comparative analysis with those of professionals who translated the same texts (Angelone, 2013b). Workplace studies in which screen recordings document translator coping strategies when faced with disturbances and interaction with CAT tools provide additional empirical foundations and analytical lenses that would lend themselves well to direct application in translator training.

Finally, workplace studies can, and should, have a direct impact on translator training curricula. Additional content could readily evolve from workplace study findings, such as the interactional dynamics among stakeholders in the lifecycle of a translation project. In summary, workplace studies, thanks to their empirical documentation of *translator* and *translation* phenomena in authentic, ecologically valid settings, can serve as an ideal vehicle for ongoing program monitoring, thereby safeguarding against an inherent danger for translator training to occur in a vacuum, detached from language industry realities.

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